



Uterocervical angle in the Second Trimester of pregnant women at low risk for preterm delivery

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Objective

This study aimed to prospectively investigate the distribution of the UCA by transvaginal sonography (TVS) in the second trimester of pregnant women at low risk for preterm delivery. A secondary objective was to determine whether the results of UCA differed between in the term and sPTB groups.

Methods

A prospective study was performed from February, 2017 to July, 2017. TVS measuring UCA and cervical length (CL) was performed in singleton pregnant women at low risk for sPTB at GA 16 0/7-24 0/7 weeks. All the data of TVS measurements and pregnancy outcomes were recorded. Distributions of UCA and CL were visualized using scatter plots against GA in both term and sPTB groups. Pearson rank correlation was used to evaluate relationships between UCA and CL.

Results

The range of UCA values in 213 term delivery participants was 39 degrees to 180 degrees in a dispersed pattern uncorrelated with GA. The mean UCAs in the term and sPTB groups were not significantly different (term group 101.7 degrees, sPTB group 101.6 degrees, $P = 0.987$). However, in the sPTB group, the UCA increased significantly throughout the GA (9.7 degrees per week, $P = 0.023$) while the term birth group showed no significant changes in UCA during the second trimester (difference in effect of GA between groups $P = 0.008$).

Conclusion

The UCAs had a dispersed distribution during GA 16 0/7-24 0/7 weeks. A single UCA value in 16 0/7-24 0/7 weeks of GA could not discriminate between the term and sPTB groups. However, the UCA significantly increased throughout increasing GA in the sPTB group, therefore the UCA progression may have a potential ability to predict sPTB.